

IMPROVEMENT OF WESTERN RIVERS.

LETTER

FROM

THE SECRETARY OF WAR,

TRANSMITTING

A report of the Colonel of the Corps of Topographical Engineers, relative to the improvement of western rivers.

MARCH 7, 1844.

Read, and referred to the Committee on Commerce.

WAR DEPARTMENT, February 23, 1844.

SIR: In answer to a resolution of the House of Representatives of the 10th ultimo, requiring the Secretary of War to cause to be laid before the House "the late report of the engineer employed in the survey of the St. Louis harbor, at his earliest convenience, together with his estimate of the probable amount necessary for its permanent improvement, and the amount of the separate estimates for the improvement of the Ohio river below the falls, for the improvement of the Mississippi river, for the improvement of the Arkansas river, and for the improvement of the Missouri river—separating the general estimates for these objects, so as to inform the House of the particular estimate of each;" I respectfully transmit a report of the Colonel of the Corps of Topographical Engineers, to whom it had been referred for the information required.

Very respectfully, your obedient servant,

WM. WILKINS,
Secretary of War.

Hon. J. W. JONES,
Speaker of the House of Representatives.

BUREAU OF TOPOGRAPHICAL ENGINEERS,
Washington, February 23, 1844.

SIR: I have the honor to submit the following report, in part, called for by a resolution of the House of Representatives of the 10th of January.

The report, plans, and estimates, in reference to the harbor of St. Louis, have been received within a few days, and are now being copied.

Very respectfully, sir, your obedient servant,

J. J. ABERT,
Colonel Corps Topographical Engineers.

Hon. W. WILKINS,
Secretary of War.

OFFICE OF WESTERN RIVER IMPROVEMENTS,
Cincinnati, January 18, 1844.

SIR: In answer to your instructions of the 13th instant, received per last mail, I have the honor to inform you that the report, drawings, &c., in relation to the contemplated improvements at the falls of the Ohio, are still in progress and nearly completed; also, that those relating to the harbor of St. Louis are in such a state of forwardness as to justify the expectation of their being all completed and ready for transmission on or about the last of this month. All the force at my disposal at this place, consisting of Captain Cram, Lieutenant Reynolds, A. Campbell, esq., and H. C. Long, is now employed (as it has been ever since the return of Captain Cram from St. Louis) in preparing reports, drawings, estimates, &c., in relation to these improvements.

In reply to your call for information in reference to a division of the contemplated appropriation for the improvement of the Mississippi, Missouri, Arkansas, and Ohio below the falls, (viz. \$249,400, as called for in your late general report to the honorable Secretary of War, pp. 131 and 137,) I cannot do better than to refer you to the opinion given on this subject, in my preliminary report, as stated in page 211 of the appendix to the document just cited; and I have as yet had no occasion to change that opinion.

In confirmation of the correctness of this opinion, and in further illustration of the subject to which it relates, I take leave to subjoin a brief statement showing the manner in which our operations for the improvement of the western rivers have been restricted during the last season, by reason of the water stages that have prevailed in those rivers, and of the respective climates peculiar to the same.

The Ohio below the falls continued too full to admit of operations in the low-water channels during the whole season. For eight or ten days in July, and during an equal period in September, the river was at such a stage as to admit of the removal of obstructions generally in its bed; but at no time has it been low enough for operating upon the shoals, either in the removal of obstructions, or in the execution of surveys. Consequently, the operations in this river have been limited to two periods of only 8 or 10 days each, during which improvements could be made, by removing snags and other obstructions. Accordingly, the force and appliances provided for service in this river, under a special appropriation for the same, could have been rendered operative during 18 or 20 days only, and must have remained unemployed during the residue of the year.

The stages of the Mississippi continued too elevated to admit of operations in the snag business till about the 18th July, when it was low enough to operate within its bed generally, but not low enough to remove sunken logs, &c. from the low-water channels. From that time to the middle of November, the stages were variable—the highest being 8 or 10 feet, and the lowest about 2 feet above extreme low water. At the date last mentioned (middle of November) the weather had become too cold and inclement for operations on the Mississippi, above the mouth of the Ohio; hence the period for operating on this part of the Mississippi was limited to about four months, and the means of operating, under a special appropriation for this portion of the river, must remain unemployed during the residue of the year.

That part of the Mississippi situated below the mouth of the Ohio, is generally at a stage sufficiently low for removing snags, &c. from about the

middle of July to the middle of March—embracing a period of about eight months; the interruptions to continued operations being such only as are occasioned by high water, rather than by inclemencies of weather. Of course, operations for improving this part of the river might be carried on to advantage under a special appropriation, but for the convenience here presented, of giving employment to the forces and appliances provided for other western waters, at times when these waters are not susceptible of their employment.

The Missouri has, at no time during the last season, been within about two feet of its lowest stage; it was low enough, however, to commence operations on or about the 1st of August, and continued so till about the 1st of November, when the weather had become too cold for a further prosecution of the work in that river: hence the period for operating in this river was about three months; and the means of operating thereon, under a special appropriation, must have lain dormant during the residue of the year, or nine months.

The Arkansas was at a stage sufficiently low to commence operations on or about the 20th of July, and continued so (with occasional interruptions from high water, however) till some time in December. Subsequently to this time, and prior to the occurrence of the spring freshet, this river is generally susceptible of operations for several weeks. Hence, on the occurrence of occasional freshets, (which take place in the Arkansas more or less frequently every year,) or on any other sufficient occasion, the snag-boats employed in its improvement may fall back to the Mississippi, and operate therein till the freshets of the Arkansas shall have subsided. Such a course could not conveniently be pursued under a special appropriation; on the contrary, the means and appliances must remain unemployed whenever the operations of the river are thus interrupted.

Under special appropriations, each river department must be furnished with means and appliances of all sorts, adequate to the service required to be done therein, independently of any considerations involving the annual duration of the service, or the length of the periods for, or the unavoidable interruptions to, its execution. For example: whatever might be the amount of an appropriation for the Ohio below the falls, the apparatus for the removal of snags, &c., must be procured and kept in readiness for service, although the opportunity for its employment may not cover a period of more than eighteen or twenty days—as was the case during the last season. Again; a special appropriation for the Missouri would require heavy expenditures in the preparation and outfit of snag-boats, &c., which could not be kept in employ more than three months in a year.

The same will hold true, in a greater or less degree, with respect to each and every department for which a special appropriation might be desired. But, under a general appropriation, the forces, boats, and other apparatus required for carrying on the snag business, may be transferred from one river to another, at pleasure, according as the stages of the water, the state of the weather, and the exigencies of the service may seem to require. Accordingly, I venture to state, with great confidence, that the requisite number and cost of boats, &c., required for carrying on the snag business, under a general appropriation, will not exceed one-half the number and cost of those that would be required to perform an equal amount of service under special appropriations for specific departments.

Although I am decidedly of the opinion that all appropriations for the

removal of snags, sunken logs, rafts, &c., should have as general a bearing as practicable with respect to the western rivers; yet there are a variety of improvements to be made in these rivers, for which special appropriations may with propriety be made. For example: the improvement of the falls of the Ohio, of the Des Moines and Rock Island rapids, the construction of wing-dams, &c., for deepening the channels across the shoals of the Ohio, Arkansas, Upper Mississippi, &c., the improvement of the St. Louis harbor, &c., may with propriety be provided for by special appropriations.

Hence, I venture to suggest the propriety of a standing general appropriation of about \$200,000 per annum, for five to ten years, applicable exclusively to the snag business on the western rivers; which is intended to include the removal of snags, sunken logs, and other obstructions, from the bed and channels of the rivers, and the felling of impending trees, &c., from the river banks; while other objects of improvement in these rivers may be provided for by special appropriations.

I have the honor to be, sir, very respectfully, your most obedient servant,

S. H. LONG,

Brevet Lt. Col. Top. Engineers.

Col. J. J. ABERT,

Chief Top. Engineer, Washington, D. C.

OFFICE OF W. R. IMPROVEMENTS,

Cincinnati, February 18, 1844.

SIR: In answer to your inquiries of the 15th instant, I have the honor to submit the following statements, which may be regarded as supplementary to the estimates contained in my report dated on the 18th ultimo, viz:

Amount required for carrying on the snag business under special appropriations.

For the Ohio river, below the falls	-	-	-	-	\$28,500
For the Mississippi river	-	-	-	-	134,040
For the Missouri river	-	-	-	-	55,500
For the Arkansas river	-	-	-	-	31,000
Amounting to	-	-	-	-	249,040

Amount required under a general appropriation.

For the Mississippi, Missouri, Arkansas, and Ohio rivers, below the falls, as per estimate of January 18	-	-	-	162,500
Difference in favor of general appropriation, as before	-	-	-	86,540

In order to show that the work contemplated to be done under the general appropriation is quite equal to that provided for under special appropriations, as above, I take leave to subjoin the following comparison, viz:

Under special appropriations,

The work provided for is equivalent to that of one large snag-boat, operating through a period of 38 months, at \$2,160 per month	-	-	-	-	-	\$82,080
And, also, to that of one steam machine-boat, operating through a period of 28 months, at \$1,100 per month	-	-	-	-	-	30,800
Estimated value of the work done by boats	-	-	-	-	-	<u>112,880</u>

Under a general appropriation,

The work provided for is equivalent to that of one large snag-boat, operating through a period of 36 months, at \$2,160 per month,	\$77,760
And, also, to that of one steam machine-boat, operating through a period of 36 months, at \$1,100 per month	-
Estimated value of work done by boats	<u>117,360</u>

Thus it appears that the value of the work done under a general appropriation somewhat exceeds that done under special appropriations; while the cost of the latter, all things considered, will exceed that of the former by \$86,540.

Respectfully submitted :

S. H. LONG,

Brevet Lieut. Col. Topographical Engineers.

Col. J. J. ABERT,

Chief Topographical Engineer, Washington, D. C.

